

In the Claims

Delete claims 22 & 30-33 without prejudice, amend claims 23, 24, 25, 26, 27, 34 & 35, and add new claim 36 as shown in the following listing of claims.

1. (withdrawn) A metal contact for a copper alloy surface, comprising:
an electroplated barrier layer having a thickness ranging from about 0.00001 inch to about 0.0001 inch, wherein the barrier layer is selected from the group consisting of cobalt, cobalt-nickel alloys, cobalt-tungsten alloys, cobalt-nickel-tungsten alloys, and rhodium.
2. (withdrawn) The metal contact of claim 1, wherein the barrier layer thickness is 0.000025 to 0.0001 inch.
3. (withdrawn) The metal contact layer of claim 2, wherein the barrier layer is cobalt.
4. (withdrawn) The metal contact of claim 2, wherein the barrier layer is a cobalt-nickel alloy.
5. (withdrawn) The metal contact of claim 2, wherein the barrier layer is a cobalt-tungsten alloy.
6. (withdrawn) The metal contact of claim 2, wherein the barrier layer is a cobalt-nickel-tungsten alloy.
7. (withdrawn) The metal contact of claim 1, further comprising an outer layer.

Claims 8 to 20. (canceled)

21. (withdrawn) The electrical contact of claim 8, wherein the outer layer is selected from the group consisting of tin, gold, silver, platinum, palladium and combinations thereof.

22. (canceled)

23. (currently amended) The method of claim 22 36, including etching the contact surface with a light acid before the electroplating step.

24. (original) The method of claim 23, including activating the contact surface before the electroplating step.

25. (currently amended) The method of claim 22 36, wherein the barrier layer is electroplated by adjusting a plating current density in the range of from about 10 to about 150 amperes per square foot.

26. (currently amended) The method of claim 25 36, wherein the electroplating step includes preparing a plating bath solution having at least one of cobalt sulphamate, cobalt sulfate, and or cobalt chloride.

27. (currently amended) The method of claim 26, including preparing the plating bath solution with a tungsten salt, an organic acid, and or ammonium oxide.

28. (original) The method of claim 27, wherein the tungsten salt is sodium tungstate.

29. (original) The method of claim 27, wherein the organic acid is citric acid.

Claims 30 to 33. (canceled)

34. (currently amended) The method of claim ~~22~~ 36, including applying a strike layer on said contact surface before electroplating the barrier layer.

35. (currently amended) The method of claim 34, including selecting wherein the strike layer is selected from the group comprising consisting of nickel and silver.

36. (new) A method of treating a copper electrical contact member to enhance performance of the member over time with respect to its electrical contact resistance, comprising:

providing an electrical contact member made of copper or a copper alloy, the member having a contact surface;

electroplating a barrier layer on the contact surface, wherein the barrier layer is selected from the group consisting of cobalt, cobalt-nickel alloys, cobalt-tungsten alloys, and cobalt-nickel-tungsten alloys;

forming the barrier layer to a thickness in the range of from about 0.00001 inch to about 0.0001 inch, and which thickness is sufficient to prevent the electrical contact resistance of the treated contact member from increasing above a given limit over a given period of time at a given temperature; and

coating an outer finish layer over the barrier layer, wherein the finish layer is selected from the group consisting of tin, gold, palladium, platinum, silver, and alloys thereof, so that the given limit of electrical contact resistance of the treated contact member is about 10 milliohms at 100 grams contact force, the given period of time is at least 1000 hours, and the given temperature is at least 150 degrees C.